APPARATUS AND METHOD FOR PROVIDING MULTIPLE POWER SUPPLY VOLTAGES TO AN INTEGRATED CIRCUIT

ABSTRACT OF THE DISCLOSURE

There is disclosed an apparatus and method for providing multiple power supply voltages to an integrated circuit. In an integrated circuit of the type comprising at least two power supply domains in which each power supply domain comprises at least one module powered by the same voltage level, the apparatus and method of the present invention blocks an output signal in a first power supply domain from being sent to a second power supply domain when the second power supply domain is in a low power mode. The apparatus and method of the present invention also blocks an output signal from a first power supply domain from being received in a second power supply domain when the first power supply domain is in a low power mode. Power sense cells are used to determine the status of power supply domains and logic circuits are used to block undesired signals. The present invention also properly synchronizes clock signals when power supply domains are activated or inactivated.